AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.(currently amended) A method of estimating channel coefficients (h) in a multi carrier transmit diversity

system operating in accordance with a block-coding scheme, comprising:

a) determining from a receive signal ~~(Y)~~ for each channel estimated channel coefficients ~~(ĥ)~~ comprising artificially introduced interference components ~~(I)~~ from adjacent channels;

b) deriving estimates ~~(Î)~~ for the interference components ~~(I)~~; and

c) determining interference-compensated estimates ~~($\hat{h}_{E+IC}$)~~ for the channel coefficients ~~(h)~~ on the basis of the estimates ~~(Î)~~ for the interference terms ~~(I)~~.

2.(currently amended) The method of claim 1, wherein the estimated channel coefficients ~~(h)~~ are determined based on the assumption that the channels do not change during an amount of instants ~~(z)~~ required to transmit two or more data symbols.

3.(currently amended) The method according to claim 2, wherein, based on the assumption, the estimated channel coefficients ~~(ĥ)~~ are determined such that the estimated channel coefficients ~~(ĥ)~~ of two or more adjacent instants ~~(z)~~ are identical.

4.(currently amended) The method of ~~one of claims 1 to 3~~claim 1, wherein determining the estimated channel coefficients ~~($\hat{h}$)~~ comprises multiplying a known data matrix ~~($\mathbf{Z}$)~~ comprised within the receive signal ~~($\mathbf{Y}$)~~ with the Hermitian ~~($\mathbf{Z}^H$)~~ of the known data matrix ~~($\mathbf{Z}$)~~.

5.(currently amended) The method of ~~one of claims 1 to 4~~claim 1, wherein the step of determining estimates ~~($\hat{I}$)~~ for the interference components ~~(I)~~ of a specific channel comprises exploiting a correlation among a plurality of channel coefficients ~~($\hat{h}$)~~ estimated for the specific channel.

6.(currently amended) The method according to claim 5, wherein the estimated channel coefficients ~~($\hat{h}$)~~ are processed such that for the specific channel an identity of estimated channel coefficients ~~($\hat{h}$)~~ which belong to adjacent instants ~~(z)~~ is broken.

7.(currently amended) The method of claim 6, wherein processing of the estimated channel coefficients ~~($\hat{h}$)~~ is effected by interpolation or filtering.

8.(currently amended) The method of ~~one of claims 6 or 7~~claim 6, wherein the estimates ~~($\hat{I}$)~~ for the interference components ~~(I)~~ are derived from the processed channel coefficients ~~($\hat{h}_{tr}$)~~.

9.(currently amended) The method of ~~one of claims 6 to 8~~claim 6 wherein the interference-compensated estimates ~~($\hat{h}_{F+IC}$)~~ for the channel coefficients ~~(h)~~ are derived from the processed channel coefficients ~~($\hat{h}_F$)~~.

10.(currently amended) The method of claim 9, wherein determining the interference-compensated estimates ~~($\hat{h}_{F+IC}$)~~ comprises subtracting the estimates ~~($\hat{I}$)~~ for the interference components (I) from the processed channel coefficients ~~($\hat{h}_F$)~~.

11.(currently amended) The method of ~~one of claims 1 to 10~~claim 1, wherein the block-coding is effected by space-time block-coding ~~(STBC)~~ or space-frequency block-coding ~~(SFBC)~~.

12.(currently amended) The method of claim 11, further comprising switching between space-time block-coding ~~(STBC)~~ and space-frequency block-coding ~~(SFBC)~~ in dependence on one or more transmission constraints.

13.(currently amended) A computer program product comprising program code portions for performing the steps of ~~one of claims 1 to 12~~claim 1 when the product is run on a computer.

14.(original) The computer program product of claim 13 stored on a computer readable recording medium.

15.(currently amended) An estimating circuit ~~(44)~~ for estimating channel coefficients ~~(h)~~ in a multi carrier transmit diversity system operating in accordance with a block-coding scheme, comprising:

a) a unit ~~(48)~~ for determining from a receive signal ~~(Y)~~ for each channel estimated channel coefficients ~~($\hat{h}$)~~ comprising artificially introduced interference components ~~(I)~~ from adjacent channels; and

b) a unit ~~(52)~~ for deriving estimates ~~($\hat{I}$)~~ for the interference components ~~(I)~~ and for determining interference-compensated estimates ~~($\hat{h}_{F+IC}$)~~ for the channel coefficients ~~(h)~~ on the basis of the estimates ~~($\hat{I}$)~~ for the interference components ~~(I)~~.

16.(currently amended) The estimating circuit according to claim 15, further comprising a processing unit ~~(50)~~ for processing a plurality of channel coefficients ~~($\hat{h}$)~~ estimated for a specific channel utilizing a correlation among the estimated channel coefficients ~~($\hat{h}$)~~.

17.(currently amended) A transceiver of a wireless communication system comprising a receiver stage ~~(40)~~ with an estimating circuit ~~(44)~~ according to claim 15 ~~or 16~~.